Why Do Trade Finance Gaps Persist

And does it matter for development?

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In this paper, we exploit a growing dataset on global trade finance demand and supply to explore the question of why trade finance supply shortfalls persist even in a non-crisis environment. In addition to confirming evidence that financial sector development and firm characteristics impact trade finance rejection rates, we further show that global regulations, lack of harmonization, and knowledge gaps contribute to a mismatch of demand and supply in many regions and sectors. We show that gaps are largest where risk is highest such as for small firms and firms in developing countries. Paradoxically, while new financial products have been rolled out to address these gaps in particular, it is the countries and firms that need them most which use them least.

1. THE RELATIONSHIP BETWEEN TRADE FINANCE AND ECONOMIC DEVELOPMENT

Trade finance has played a critical role in the expansion of trade and growth over the last century (see e.g. Bordo and Rousseau, 2012). The literature characterizes the world as one where, under normal conditions, trade finance facilitates trade, and in crisis conditions, it can transmit contagion and exacerbate downward spikes in export flows. In the most recent global shock, these negative feedback loops were in clear evidence. But what happens once the crisis has abated? Our research provides some early evidence about what financial frictions look like in non-crisis periods and how this landscape is created and maintained.

Intuitively, the natural frictions and information asymmetries between borrowers and lenders will result in a situation where trade finance supply does not fully meet demand, even in a non-crisis situation (see e.g. Stiglitz and Weiss, 1981). The implications for development are obvious - productivity and job creation will be limited, export diversification and survival rates will be lower than expected (Contessi and deNicola,2013), and low-risk opportunities will go unfunded.

Yet, these impacts and indeed the existence of trade frictions are only lightly empirisized. Our knowledge of what the trade finance landscape actually looks like today is opaque. While credit rationing models have suggested why demand and supply might not meet, there is only very limited empirical data to test them with. The reason is that data linking the demand for and supply of trade finance is both confidential and, more often, simply not collected.

This paper describes the results of a dataset collected by the Asian Development Bank over 2013 and 2014 that represents a first attempt to decode the current state of trade finance and the reasons that global trade finance gaps continue to exist (Beck et al, 2012; DiCaprio et al, 2014). The next section briefly describes what we know about trade finance gaps. Section 3 then describes what the trade finance gap looks like over several dimensions. Section 4 uses a simple model to explore which features of the global economy and bank-firm relationship are driving shortfalls in trade finance. Section 5 concludes.

2. A BRIEF HISTORY OF TRADE FINANCE GAP DATA

There is a robust literature on trade finance. Major areas of study include credit rationing models (eg, Stiglitz and Weiss, 1981), the relationship between trade finance and trade outcomes (Hur et al, 2006), the impact of the quality of financial institutions on development (Manova et al, 2011; Chong, 2013) and the difficulties SMEs face in obtaining trade finance (Duval and Utoktham, 2014; Ryan et al, 2014).

Yet what we know about trade finance trends and impacts are largely model driven. The reason is that trade finance data is confidential at best and not collected at all in most cases. In this section we briefly highlight what data there is and what it tells us.

a. What is trade finance?

Trade finance is one of the primary categories of assistance that financial providers offer to firms to facilitate global commerce. Conceptually, it consists of four elements: payments, financing, risk mitigation and information (Malaket, 2014). As it is generally described, trade finance involves loans and guarantees from banks[1] that underpin imports and exports. It is typically of short tenor and supports cross border trade by either directly providing funding or through unfunded guarantees on behalf of the importer to the exporter. The most common form of trade finance instruments are letters of credit, deferred letters of credit, and trade loans.

Exporting firms of any size require financing support to enable their production and trade activities. In addition to normal operating costs they face additional expenditures tied to the export process. These can include for example, learning about foreign markets, regulatory compliance, and product customization (Foley and Manova, forthcoming). The limited participation of SMEs among exporting firms is in part explained by their relatively higher costs related to both these expenditures and the cost of trade finance.

b. Estimates of trade finance levels during the Global Financial Crisis

[1] Loans to manufacture for export or to purchase imports, Guarantees are often in the form of letters of credit which represent a bank obligation to pay, thereby removing an exporter's payment risk on an importer and replacing it with a bank risk (risk on the bank that issued the letter of credit or other trade finance instrument). Apart from banks, insurance companies and export credit agencies (ECA) also provide trade finance products.

The period following the Global Financial Crisis (GFC) of 2008/09 produced some important insights into the state of global trade finance. Prior to the crisis, interest in trade finance flows was largely of interest only to a limited number of industry bodies, such as SWIFT and other financial providers and regulators. The data they collected (described below) detailed flows of particular instruments.

When the GFC hit and global GDP took a dive, development banks, governments, and global financial institutions were caught without a way to calculate the correct response. Were the plunging trade numbers the result of credit rationing? Was the demand for trade finance simply lower because of the lack of trade?

Two prominent, but one-off surveys were produced in this period to estimate the volume and change in availability of trade finance. Data varies widely, so trends are the most informative element. The IMF produced a paper with BAFT-IFSA that surveyed 63 banks. This data illustrated the beginnings of a recovery 17.1% of respondents reported to have received more trade finance in 2012 than in 2011, with the most notable change seen in emerging Asian countries which include the People's Republic of China and India.

Another comprehensive survey was done through the Committee on the Global Financial System. BIS compiled an extensive array of sources, most of which use 2011 data (BIS, 2014). The estimated value is calculated from national data of different CGFS members plus L/C figures from SWIFT. Cross-checks are done with data from the ICC Trade Register. Bank intermediated trade finance was projected globally to be approximately US $6.5 to 8 trillion, US $2.8 trillion of which are L/Cs.

c. Ongoing trade finance flow data

Of more interest to those seeking to understand the links between development and trade finance are ongoing surveys of the usage of trade finance products. These are produced by SWIFT and ICC (via the Trade Register). SWIFT has produced data on documentary letters of credit since 2001. These data give us insights into changes in supply of the most prominent form of trade finance.

Another ongoing dataset is the ICC's Trade Finance Register. The register measures default and loss rates on transactions. This register was piloted by the ICC together with ADB in an effort to give statistical weight to the argument that trade finance carries a relatively low probability of loss. The original data set, which spanned 2004–2009, found a very low 0.02% probability of default. In the latest report for 2014, the default rate on trade finance was identified at 0.05% on more than 11 million trade finance transactions.

d. Gap estimates

Empirical estimates of gaps in trade finance are very rare. Two examples are both outputs of Multilateral Development Banks (Gajigo et al, 2014; DiCaprio et al, 2014).[2] Both efforts were aimed at gaining a

[2] A third comes from a private firm, Dealogic. Since their data is not public, we do not explore this source further here.

better understand of the regional markets in order to improve and expand the loan and guarantee programs being offered by these institutions.

The African Development Bank surveyed 276 banks on their provision of trade finance in 2011 and 2012 (Gajigo et al, 2014). Aggregating on and off balance sheet transactions, their population reported a slight decline in trade finance supply, but also a decline in unmet demand. They estimate unmet demand in Africa at US$120 billion in 2011 and US $110 billion in 2012.

The Asian Development Bank has done two iterations of a global trade finance survey in 2013 and 2014 with a third in progress for 2015. This produced estimates for 2012 and 2013 globally. The bank population surveyed was global. In contrast to other studies, the ADB surveys include both a provider instrument and a user instrument. This generated data on both demand and supply. The Provider Survey includes 4 populations with a standard set of questions that are adjusted slightly for respondents. These populations include banks, forfaiting companies, factoring companies and credit insurance providers. Banks are the primary source of the data with other populations serving mainly to check if they follow the same trends. The user instrument consist of companies that use trade finance.

Trade finance gaps are difficult to measure for three reasons. The first is data collection – few banks have a single point of acceptance for trade finance proposals, so any value given for how much was requested is an estimate and probably a relatively inaccurate one. The second is data reporting – few banks are willing to release exact numbers of trade finance proposals that were funded as this is proprietary. The third reason is that where there are estimates of the proportion of proposals that were rejected, these do not account for the quality of the proposals. Equilibrium trade finance is not one where all requests for finance are granted. Some proposals are inappropriate, or do not meet minimum requirements.

From this section, we can see that while the theory around trade finance is advancing, actual data on trade finance demand and supply remains in short supply. Where there is data, it varies widely in both the target being measured and the consistency of the measurements. For this reason we take the position that trends are the most revealing feature of the data.

3. WHAT DOES THE 2014 TRADE FINANCE GAP LOOK LIKE?

The relationship between trade finance and trade outcomes gained particular attention during the GFC. The decline in world trade flows (and especially manufacturing flows) was greater than the decline in world GDP. The contraction of trade finance is one of the primary explanations put forth to explain the magnitude of the trade shock

Yet finance gaps are not something that only occur during a shock. In the seminal article on credit rationing, Stiglitz and Weiss (1981) modeled the case where credit rationing can be an equilibrium condition in a loan market. In addition, the literature has shown that there are ways to increase the flow of credit that have nothing to do with borrowers themselves. For example, Agur (2013) shows that when banks switch from unsecured to wholesale funding, the supply of credit becomes tighter.

And the impacts of gaps affect more than just production. We know for example that trade decreases with weaker contracting environments in either the exporting or importing country (Schmidt-Eisenlor, 2013). And there is evidence that inadequate levels of trade finance will reduce both the total volume of a firm's exports as well as the variety of goods it produces (Contessi and deNicola, 2013). Related to this, finance shortfalls can limit firms to participation in only low value-added stages of production (Manova and Yu, 2012).

In this section, we explore some of the results of the ADB Trade Finance Survey which suggests that even in 2013, five years post-crisis, a global trade finance gap exists at an estimated US$ 1.9 trillion, 80% of which is in Asia. This gap was unevenly distributed both geographically and among transaction and firm types. We highlight four elements of the post-crisis gap that were uncovered by the most recent survey.[3]

a. Gaps are greatest in Asia and in emerging economies

Geographically, shortfalls are widest for emerging economies across the globe and countries in Asia and Africa. The ADB survey broke down rejection rates of total proposed transactions by region. While disaggregation beyond the regional level is only very limited we can see that rejection rates are greatest for emerging economies. This supports the literature in which it is already well-established that emerging economies are most impacted in financial crisis (Dorsey, 2009). Probably because weak financial infrastructure correlated with less trade finance (Beck, 2002).

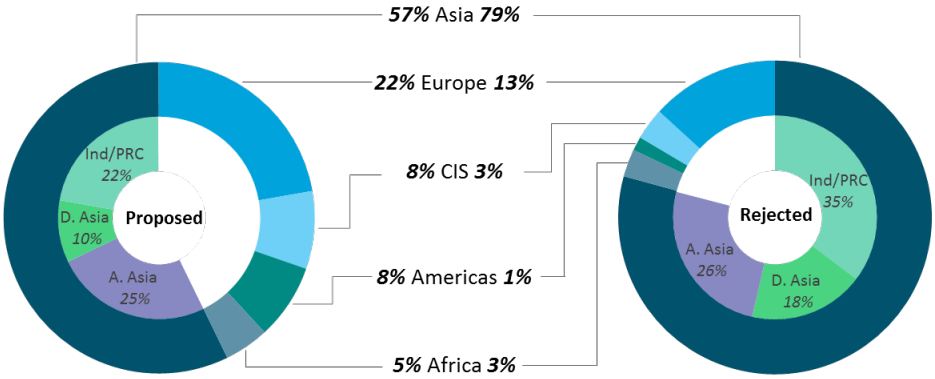
Table 1: Trade finance gaps by region (in Billion USD)

Region	Billions US$	%
Global	**1977**	**100**
Asia	1578	80
Advanced Asia	519	26
Developing Asia	359	18
India & PRC	699	35
Europe	260	13
CIS	60	3
Africa	60	3
Americas	20	1

[3] Our estimated volume of trade finance rejections by banks is 28.75%. Cross validating with the 2014 BIS result, we get gaps ranging from 1.8 to 2.3 trillion USD. Our estimates of trade finance gaps use the definition of rationing – the gap between credit demand and credit supply. Because of the sensitivity of the data, we cannot account for the reasons supply is not given. Thus we assume that our estimates are at the upper end of the true gap. We believe that the order of magnitude is in the right ballpark.

In order to project a global gap number from our survey, we weighted each responding bank by its total year-end bank assets. This process enables us to estimate the global proportion of trade finance covered by our respondents. For the 2014 projections, it is estimated that our survey covered 24.87% of total global bank assets.

Figure1: Distribution of proposed and rejected trade finance transactions by region



In terms of geographic distribution, Asia dominates the trade finance business. Asia registered the largest share of proposed trade finance transactions in the study at 57% of the global total (see Figure 1).

Geographically, much of the gap in trade finance happens within Asia. Of the reported $1.9 trillion gap, $1.1 trillion is in developing Asia (including India and the PRC). Asia registered the largest share of proposed transactions at 57% of the global total. However, Asia also received the highest proportion (79%) of global rejected transactions as opposed to the global average of 29% (see Figure 1). Asia's BRICs countries - India and the People's Republic of China (PRC) – registered the highest proportion (35%) of rejected transactions.

While Africa faced a lower rejection rate than Asia, banks reported that AML/KYC caused the biggest problems for issuing banks in that region. ADB estimates of the 2013 trade finance gap in Africa are lower than that which was reported by the AfDB for 2011 and 2012. However it moves in the same direction as their estimates. In Africa estimated gaps were 120 billion and 110 billion (in 2011 and 2012 respectively).

b. SMEs are the least engaged

In terms of firm types, our survey data confirms that SMEs are the least engaged with formal trade finance. SMEs are not the major users of either trade or supply chain finance. Thus for most banks, they are not target clients. Yet, those SMEs which export are heavily dependent on the lines of credit they receive as they are often weakly tied into global trade.

This is a particular problem for Asia where, more than 90% of firms are SMEs. Yet an overwhelming majority do not engage in direct exports (Duval et al, 2014). According to surveys, limited access to finance is consistently among the primary export constraints for SMEs. This section briefly looks at three ways that SMEs engage differently with trade finance when compared to other firm types.

SMEs were particularly hard hit during the GFC as a result of the scarcity of capital among many banks. This led to financial institutions focusing on core clients in strategic markets at the expense of SMEs and developing countries. While the crisis has subsided, these populations remain underserved and represent market segments and regions with proportionally high market gaps for trade finance.

Survey results indicate that these gaps affect SMEs more adversely than any other type of company. Fifty-one cent of SME applications for trade finance were rejected versus only 7% for multi-national companies. In addition, rejection rates are consistently higher for SMEs across all trade finance platforms (Table 2).

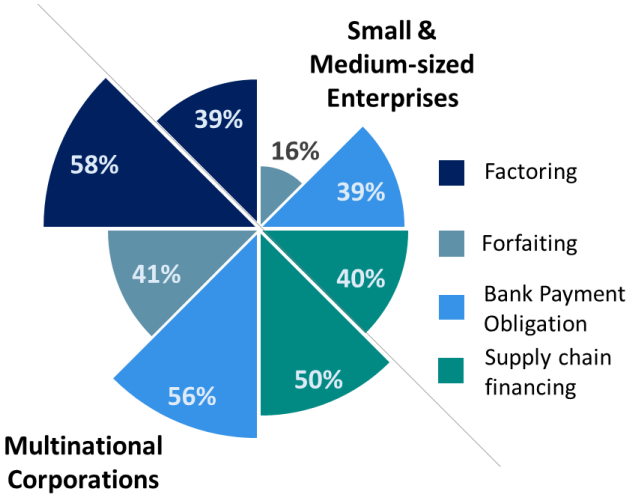
Table 2: Comparison of average amount rejections between SMEs and non-SMEs across trade finance platforms

	SMEs	Non-SMEs
Traditional products		
L/C import financing	18.3	12.2
L/C export discounting	10.9	2.4
Working capital financing	26.5	12.1
Credit insurance	4.5	3.1
Non-traditional products		
Bank payment obligation	8.5	1.7
Supply chain financing	7.5	5.9
Factoring	3.7	0.6
Forfaiting	0.7	0.4

To offer some perspective on why it is important to bridge this gap, we relate trade finance shortfalls to production and employment. Studies have underscored the importance of banking relationships for employment outcomes. It has been shown that the withdrawal of credit accounted for at least 33% of the employment decline in SMEs following the global financial crisis (Chodorow-Reich, 2014). The 2014 ADB survey supported this finding by showing that access to 15% more trade finance would increase production by 22% and would induce firms to hire 17% more staff.

Finally, the lack of engagement of SMEs with trade finance is likely partly explained by a lack of familiarity with existing products and options. For example, supply chain financing is said to be the most likely form of financing that will increase SME exports (Duval et al., 2014), yet the survey found out that only 40% of the SMEs respondents knew what that was (Figure 2).

Figure 2: Comparison of familiarity with trade finance products (SMEs vs. MNCs)



Related to the issue of SME shortfalls is that many of the Multilateral Development Banks have trade finance guarantee programs that are intended to address this. The ADB Trade Finance Program for example, covers all firm types but the vast majority of the deals that are covered are with SMEs. This is interesting because while it is a stated goal, there are no incentives for bank to lend to SMEs. Thus it illustrates that this is a market where a relatively minor bridge such as a guarantee which is low risk and low cost can have immediate impact on a targeted form of lending.

c. There is some diversification of instruments, but beyond bank-mediated finance expansion has been limited

Trade finance involves a wide range of instruments and is undergoing a period of innovation. New products, such as supply chain finance and BPO are intended to reduce financial frictions. And efforts are being made at the global level to increase the geographic spread of some products and to increase knowledge of others. However, the 2014 ADB survey suggests that the reach and uptake of these instruments has been slow. Table 3 highlights the large difference between rejection rates of traditional instruments, such as letters of credit (81% of total trade finance requests) and newer instruments like supply chain finance (1%).

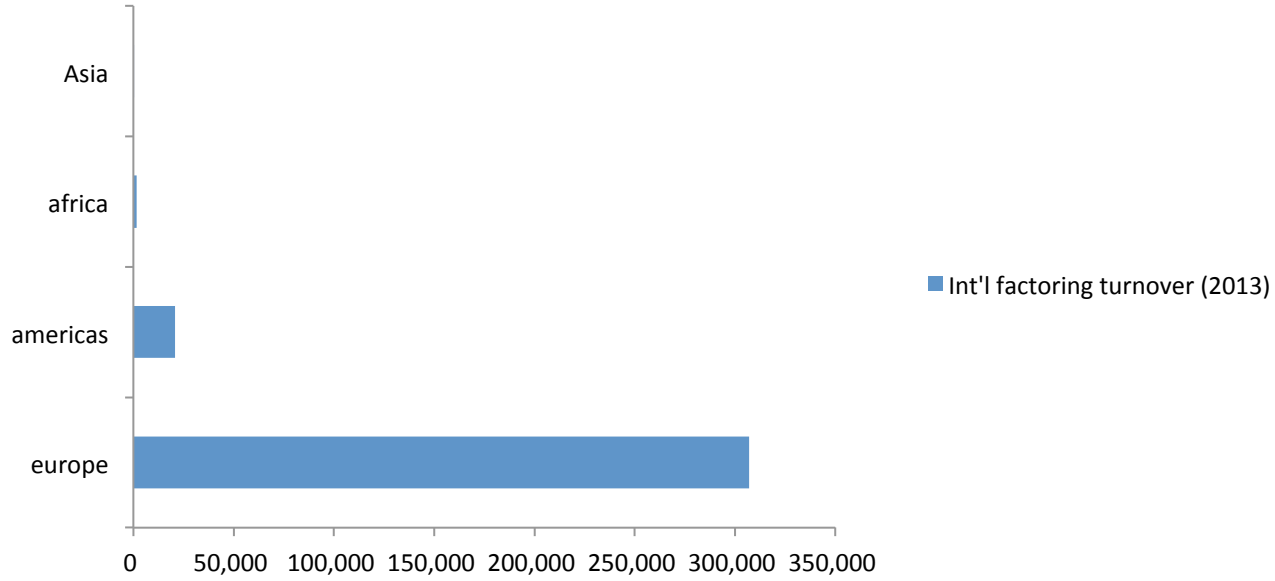
Table 3: Trade finance gaps by transaction type (Billion USD)

Transaction type	Volume	Percentage
L/C import issuance	1617	81
L/C export confirmation and discounting	272	14
Working capital for pre-export financing	89	4
Supply chain financing including invoice discounting	20	1

An interesting angle to this uneven distribution is that rejection rates for instruments other than bank finance may be lower than traditional bank finance. In the company surveys, only a very few proposals for factoring, forfaiting and credit insurance were reported and rejection rates for these were very low at 5-16%. This suggests that these forms of finance have considerable room to expand globally. At the same time, providers reported an increase in demand for factoring and forfaiting services by more than 50% in 2013. This suggests that expansion in these products is moving forward.

One reason for limited use of instruments is that their availability remains limited beyond traditional markets of the US and EU. There is some growth in different regions, especially Asia. However the example of factoring for international finance provides a good idea of the uneven growth patterns. Globally, factoring volume has been growing at 15% per year since the crisis and China is now the largest factoring market in the world (FCI, 2013). Yet, we can see in the figure below that Asia barely shows up when we look at *international* factoring.

Figure 3: International Factoring Turnover by value (2013)



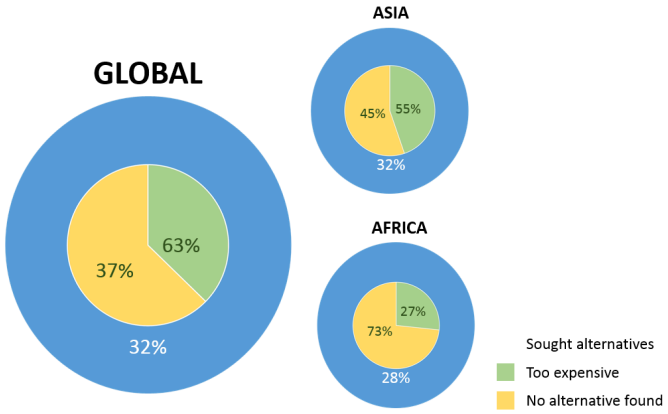
Source: FCI, 2013

There are many other potential explanations for the limitation of growth in different types of instruments. Anh (2011) looks at the behavior of firms and how they interpret different forms of credit. Niepmann and Schmidt-Eisenlohr (2014) discuss the use of different instruments for different risk profiles. Letters of credit are highly concentrated. Export destinations that rely heavily on letters of credit are riskier than those which use documentary credits.

d. Alternatives are not sought for rejected transactions

A high proportion of companies (68%) that reported they did not seek alternatives for rejected transactions. Of the 32% which did seek alternative financing, 20% did not find any alternative, and the remaining 12% successfully found alternative financing, but it was too expensive.

Figure 4. Availability of alternatives to rejected finance transactions



When we break this down geographically as in Figure 4, we can see that in Asia, when alternatives are sought more than half of the time, they are too expensive. While in Africa, about 2/3 of the time, often no alternative is found.

A related cost issue comes from countries which have either no sovereign credit rating or poor sovereign ratings.[4] These (lack of) ratings have a direct impact on the cost of trade finance and increase costs to companies working in or with developing countries. While this survey's data does not separate out individual countries, this is in evidence in regions where costs are particularly high.

4. THREE DRIVERS OF TRADE FINANCE GAPS

In the previous section we described what the landscape looks like based on the ADB survey. An additional contribution of the survey data is that it also offers insight into why shortfalls persist. The literature offers some suggestions – bank switching is difficult (Chodorow-Reich, 2014), and riskier borrowers will face high prices (Stiglitz and Weiss, 1981). But we are able to detail problems with more precision.

[4] look at Ratha et al, 2010 for some additional information

We find that there are three primary categories of reasons that trade finance gaps persist. The first two are supply-side elements including risk sensitivity and issues related to financial governance. The third however is a demand-side issue that was briefly mentioned earlier in the paper: firms simply do not know that some instruments exist and so do not submit proposals that might very well have been accepted.

Before going into detail, we present a simple model to confirm that the demand-side issues are correlated with banks' rejection rates. The explanatory variables used in the model are a combination of bank and country data and impediments of trade finance stated in the survey.[5]

Dependent variable: log(total amount of rejected trade finance transactions)

Variable	initial	imputed	final
log(GDP)	0.78**	0.90***	0.85***
	(0.14)	*(0.19)*	*(0.19)*
log(assets)	0.37**	0.36**	0.43**
	(0.06)	*(0.13)*	*(0.12)*
Asia	1.58**	1.25	-
	(0.47)	*(0.76)*	
issuing	-1.21	-0.96	-
	(0.74)	*(1.00)*	
AML/KYC requirements	2.28**	1.89*	2.37**
	(0.46)	*(0.80)*	*(0.81)*
Basel regulatory requirements	1.06	0.90	-
	(0.72)	*(0.92)*	
Low country credit ratings	-0.36	-0.58	-
	(0.48)	*(0.80)*	
Issuing bank's low credit ratings	-3.53**	-3.12***	-3.09***
	(0.68)	*(0.74)*	*(0.72)*
Previous dispute or unsatisfactory performance of issuing banks	3.47**	2.78***	2.58***
	(0.68)	*(0.75)*	*(0.71)*
Constraints on your bank's capital	-1.74*	-0.55	-
	(0.58)	*(0.96)*	
Lack of dollar liquidity	-0.74	-1.77*	-1.72*
	(0.61)	*(0.80)*	*(0.74)*

[5] While 101 banks responded to the provider survey, only 20 provided full answers. In order to have a reasonable n, we used a multiple imputation procedures (as discussed in Rubin 1978, 1996). In this method, missing values are replaced by a set of plausible values from a predictive distribution of missing values given the observed values. There are three estimated models presented in this paper. The first *initial* model is the one with missing observations. Only 20 complete response vectors out of 101 observations are used. Next is the multiply-imputed model which summarizes regression analysis from 100 different imputed datasets. The third one is the *final* model which removes any insignificant variables in the *imputed* model.

High transaction costs or low fee income	-0.10 *(0.53)*	-0.15 *(0.82)*	-
Low company/obligator credit rating	2.14** *(0.45)*	1.74* *(0.69)*	1.77** *(0.63)*
Insufficient collateral from company	-0.21 *(0.55)*	0.49 *(0.81)*	-
intercept	-9.76** *(1.84)*	-10.78*** *(2.36)*	-10.88*** *(1.66)*
Number of observations	20	101	101
Number of imputations	-	100	100
r-squared	0.99	0.91	0.86

Notes: * corresponds to $p \leq 0.05$, ** $p \leq 0.01$ and *** $p \leq 0.001$.
Values enclosed in *( )* are standard errors of estimated coefficients.

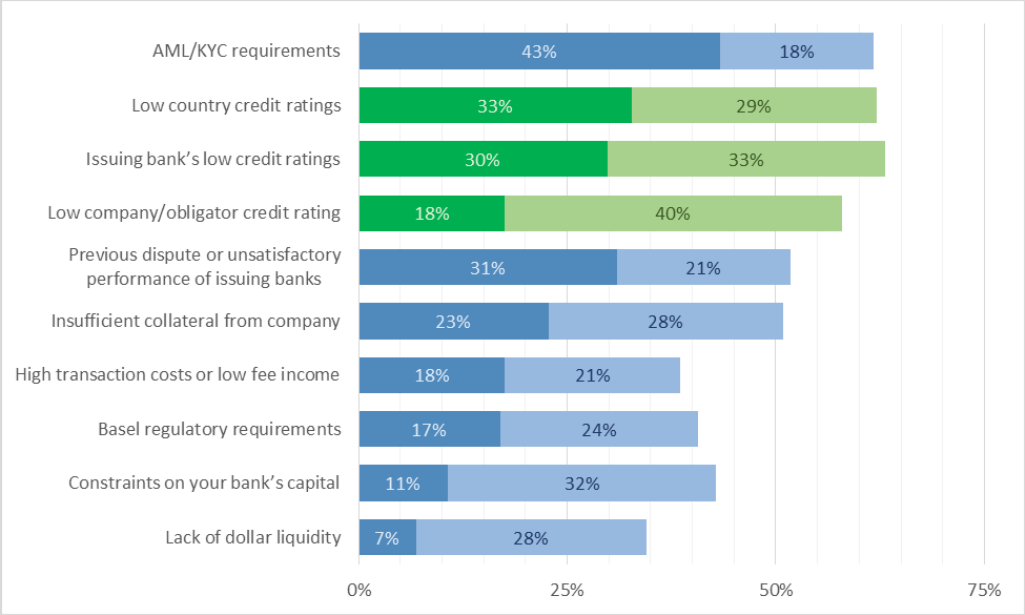
We can see that the higher the total assets of a bank, the higher its expected rejected amount of trade finance requests will be, holding all other factors constant. This is obvious since banks with higher asset values are the ones receiving higher trade finance proposals, which lead to a higher range for rejections. An analogous interpretation can also be made for GDP. Dichotomous variables *Asia, Issuing* and *Low country credit ratings* are not significant in the model and may be partly due to the presence of GDP and bank asset variables.

As part of risk mitigation, two factors which can be regarded as drivers of trade finance gap reflect previous experiences and relationships with other banks and companies. In particular, banks which have previous unsatisfactory or dispute with the issuing banks have on the average higher trade finance rejections than those who do not. This is the same scenario with companies/obligators with low credit ratings. Banks have higher tendencies to reject trade finance requests coming from them.

a. Borrower characteristics are the primary category of impediments

Banks reported that characteristics of firms, issuing banks and countries were the primary category of reason for rejection of trade finance proposals (Figure 5). This is also reflected in the regression table above were low ratings of the issuing bank or obligor were a significant reason for rejection

Figure 5: Impediments to the provision of trade finance
(% reported as very significant and significant)



b. Governance of the financial system is limiting the provision of credit.

De-risking is a feature of the international financial system that has received wide attention in the literature. Our survey results reflect that the concerns appear to be rightly targeted. According to the survey results, sixty-one percent of banks reported that Anti-Money Laundering/Know Your Client (AML/KYC) due diligence requirements were significant impediments to their provision of lines of credit (Figure 5 above).

These requirements had come into force following the terrorist attacks on 11 September 2001 in the US. They were intended to help banks, and in the process regulators, identify ultimate beneficiaries for banking transactions. This can then help prevent financing for terrorism, drug trafficking and other illegal activities.

However the costs of compliance checking along with the high expected cost of violations appear to have resulted in over shooting by regulators and contracted credit by banks. Banks reported that AML/KYC reporting requirements led to declined transactions by 68% of responding banks. But the constraint goes beyond transactions. More than 32% of banks report that they have terminated correspondent relationships because of AML/KYC.

On cost, it is extremely costly and time consuming for a financial institution to carry out these requirements in countries such as Bangladesh or Nepal on an annual basis.[6] The result is that banks generally have either pulled out of some developing countries or do not bother going into developing markets. As such, banks are increasingly unable to provide the guarantees that are so important to trade with emerging markets.

Compounding the cost and labor required to comply with these requirements is a lack of harmonization between jurisdictions. For international banks operating in multiple jurisdictions, the overlapping requirements can be prohibitive. The unintended consequence of onerous and overlapping AML/KYC regulation is that banks, in some cases, would rather terminate a relationship that try to comply.

On the threat of violation, Data from the ICC Trade Register shows that trade finance is a very low-risk proposition. But it is likely that the large payouts from a few violations in the US have resulted in a case where banks overestimate the risk.[7] In behavioral psychology this is known as the availability cascade (Sunstein and Timur Kuran) where the importance of a risk is judged by the fluency with which it comes to mind.[8] In particular the mechanisms of the availability cascade can lead to exaggeration of minor threats which can, as in this case, lead to important consequences (Kahnman, 2012, p. 144.)

Geographically, Asia and Africa were most negatively impacted. In those regions, more than 50% of banks reported AML/KYC as a significant constraint. Developing Asia (including India and the PRC) also reported a large negative impact with 45% of banks responding that compliance was a significant constraint on their relationships. Emerging markets and SMEs are disproportionately affected. Many international banks have terminated relationships with banks in emerging markets, in some cases pulling out of countries entirely, not because they believe financial crimes are being perpetrated by correspondent banks and other clients, but because the cost and effort associated with regulatory compliance is so high.

As a response, SWIFT, the member-owned global banking cooperative, has launched a KYC Registry. This register aims to be a central repository for all KYC and AML information required of banks, making it easier and cheaper to acquire the information needed to comply. ADB's TFP has played a leading role in promoting SWIFT's KYC Registry among its partner banks. While the Repository may attenuate some of

[6] One trade finance professional expressed exasperation that in order to obtain compliance they had to "ask for things like the CEO's phone bill for proof of residence."

[77] A lack of clarity on what constitutes compliance and varying compliance requirements among jurisdictions exacerbate the de-risking effect of AML/KYC. This is particularly important because the other impediments that were ranked highly are more clearly associated with company and credit risk.

[8] For example, when there is a disaster that is well covered in the media, people may overestimate its frequency or impact. The relationship here is that there were a few very high profile sanctioned banks in the American news media (examples). So while the frequency of punishment from non-compliance is rare, the consequences are so big and well publicized that banks and the bankers pricing risk overestimate them. Thus leading to distorted priorities.

the unintended negative consequences of AML/KYC regulatory requirements, it won't provide a full solution.

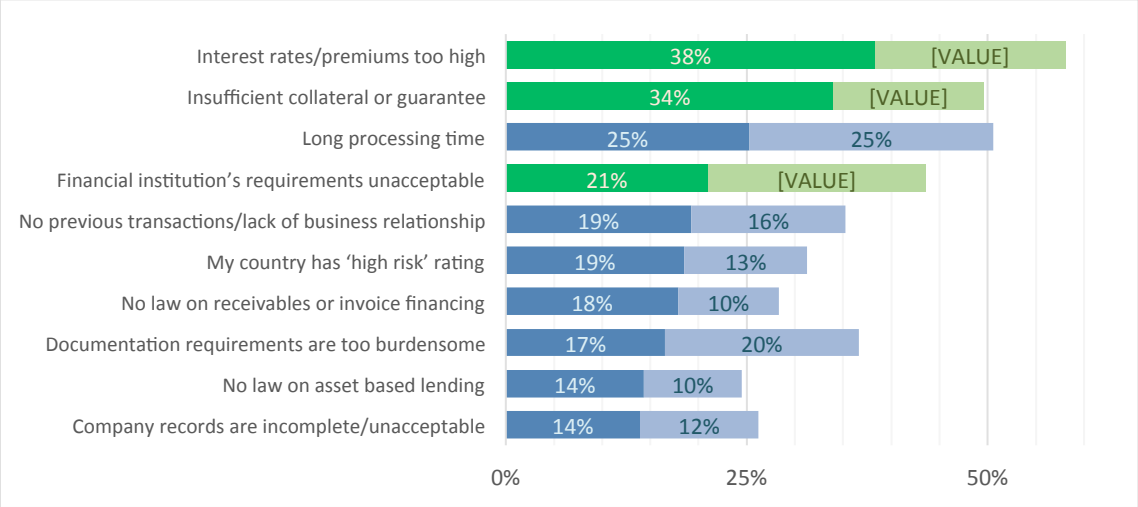
Regulation is a tricky thing to get right and there are almost always unintended consequences. It is ironic that central banks are pumping money into economies through Quantitative Easing (QE) initiatives in an effort to stimulate economic growth and jobs, and at the same time they constrain the delivery mechanism of this QE, banks, through BASEL III and other regulatory initiatives designed to create a more robust international financial system.

c. Demand side trade finance inhibitors and lack of information of products

A final category of drivers for gaps comes not from the supply-side but from the demand side. In earlier sections, we mentioned that the trade finance gap estimated using the ADB survey was likely to be at the upper end since we could not control for quality of applications. We also mentioned that there are a variety of products. If firms are not properly matching their applications to the right instruments, the rejection rate may overstate the gap due to the assumption that it is a supply-side issue when in fact it is a question of matching.

The user instrument of the ADB trade finance survey asked firms what they perceived to be the greatest limiters on their ability to attain trade finance (figure 5). The most prominent sentiment among the companies is that the prerequisites required for obtaining trade finance are unattainable.

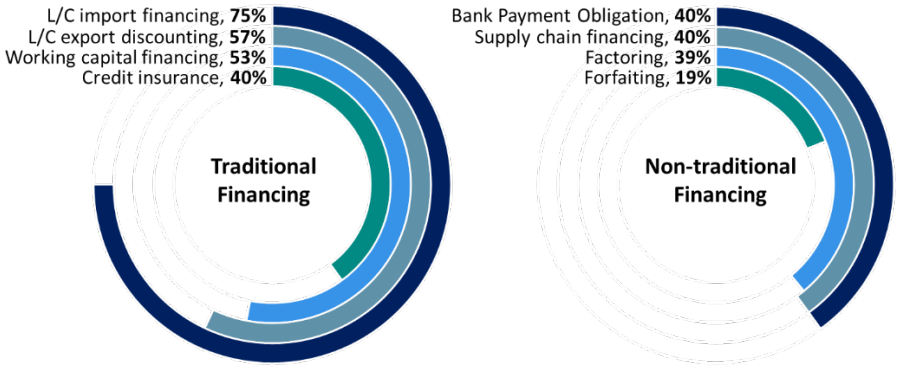
Figure 5: Factors limiting firms' ability to obtain trade finance (% reported as very significant and significant)



Yet another reason appears to be information asymmetries. Seventy-eight percent of companies reported that they would benefit from greater financial education. This is clearly reflected in a lack of familiarity with financial products. In the case of nontraditional products such as factoring, forfaiting, BPO and supply chain finance, less than 40% of companies report familiarity with these instruments.

Even within traditional bank products, companies reported limited familiarity (40%) with relatively established products such as credit insurance (figure 6).

Figure 6: Familiarity with traditional and nontraditional financial products (% of responding firms)



5. CONCLUSION

The reason that we are concerned with the reasons for financial frictions is because the impact on firms is well known. Shortfalls lead to a reduction of employment (Chodorow-Reich, 2014), and dampen production for export (Manova, 2013) among other outcomes. In addition, exports and domestically-owned firms are impacted more than domestic production (Manova, 2013) and foreign affiliates (Manova, Wei and Zhang, 2011).

In our exploration of trade finance from both the provider and user perspective we conclude that there are three primary implications for economic development in countries where gaps are the largest.

The first is the very real problem that global governance is having an unintended constricting effect on trade finance provision. We are certainly not the first to highlight this issue. It is clear from many others that this has a dampening effect on trade finance flows. However, our study is the first that enables us to compare the comparative significance of this factor. Perhaps somewhat surprisingly all bank respondents identified AML/KYC as the greatest constraint. Furthermore, other types of providers such as those from factoring, forfaiting and insurance were less impacted to the extent that it was not always identified as the primary constraint.

This raises questions about how to best regulate global trade finance. Several recent papers have highlighted problems with a lack of a global regulatory body in this sector (e.g. Tierney, 2014; Buthe and Mattli, 2011; Brummer, 2010). But there is little movement towards this reality.

The second implication for development is that some elements of this problem have straightforward solutions for example via information sharing with firms. If in fact part of the reason that trade finance is seen as such a constraint is simply that firms are not aware of the variety of instruments and providers available, then this is a space where development banks and other public actors have an important role to play.

Finally, limitations in bank relationships constrain intra-regional trade growth particularly in the poorest countries. Where countries do not have sovereign risk ratings, confirming banks are often unwilling to accept requests from issuing banks. It is simply not possible to price the risk. Even where a local bank provides working capital to firms, it may not be able to create relationships with confirming banks in the target market.

This limits not only trade, but in particular South-South trade. With the exception of a few global banks, there are no bank relationships between Latin America and Asia outside of China, Japan, Singapore and South Korea. And links between Asian and African banks are even more limited.

BIBLIOGRAPHY

Agur, I. (2013), "Wholesale bank funding, capital requirements and credit rationing," *Journal of Financial Stability*, Vol. 9, pp. 38-45.

Beck et al (2012)

BIS (2014) "Trade Finance: Developments and Issues," CGFS papers No. 50.

Bordo, M. and P. Rousseau (2012) "Historical Evidence on the finance-trade-growth nexus," *Journal of Banking and Finance*, Vol. 36, pp. 1236-1243.

Brummer, C. (2010) "Why Soft Law Dominates International Finance—and Not Trade," *Journal of International Economic Law*, Vol. 13(3), pp. 623-643.

Buthe, T. and W. Mattli (eds) (2011), The New Global Rulers: The Privatization of Regulation in the World Economy, Princeton: Princeton University Press.

Chodorow-Reich, G. (2014) "The Employment Effects of Credit Market Disruptions: Firm Level Evidence from the 2008-2009 Financial Crisis," *Quarterly Journal of Economics*, Vol. 129(1), pp. 1-60.

Contessi, S. and F. deNicola (2013) "What do we know about the relationship between access to finance and international trade?" Federal Bank of St. Louis.

DiCaprio, A., Beck, S., and J. Daquis (2014) "ADB Trade Finance Gap, Growth, and Jobs Survey," ADB Brief No. 25.

Duval, Y. and C. Utoktham (2014) "Enabling Participation of SMEs in International Trade and Production Networks: Trade Facilitation, Trade Finance and Communication Technology," UNESCAP TID Working Paper No. 03/14.

Foley, F. and K. Manova (forthcoming) "International Trade, Multinational Activity, and Corporate Finance,"

Gajigo, O., Triki, T. and Drammeh, L. (2014) "Trade Finance in Africa," African Development Bank Report.

Hur, J., Raj, M., and Y. Riyanto (2006) Finance and Trade: A Cross-Country Empirical Analysis on the Impact of Financial Development and Asset Tangibility on International Trade," *World Development,* Vol. 34(10), pp. 1728-1741.

Kahneman, D. (date) Thinking Fast and Slow. New York: Farrar, Straus and Giroux.

Malakat, A (2014). Trade finance textbook…

Manova, K., Wei, S., and Z. Zhang (2011), "Firm Exports and Multinational Activity Under Credit Constraints," NBER Working Paper No. 16905.

Manova, K. and Z. Yu (2012) "Firms and Credit Constraints Along the Global Value Chain: Processing Trade in China," NBER Working Paper No. 18561.

Niepmann, F. and T. Schmidt-Eisenlohr (2014) "International Trade, Risk, and the Role of Banks," Federal Bank of New York Staff Reports.

Ryan, R., O'Toole, C., and F. McCann (2014) "Does Bank Power Affect SME Financing Constraints?" *Journal of Banking and Finance*, Vol. 49, pp. 495-505.

Schmidt-Eisenlor, T. (2013) "Towards a Theory of Trade Finance," *Journal of International Economics*, Vol. 91, pp. 96-112.

Tierney, M. (2014) "Rising Powers and the Regime for Development Finance," *International Studies Review*, Vol. 16(3), pp. 452-455.